

TOWABLE NAUTICAL DEVICE FOR LEISURE ACTIVITIES

This invention concerns a non-motorised towable nautical device, preferably inflatable, which may, on occasion, leave the liquid element and procure specific
5 sensations in the pursuit of a collective aquatic leisure activity.

Certain inflatable, non-motorised towable nautical devices, traditionally long in shape, offered solely the possibility for the passengers to sit placed one behind the other to follow the movements of the waves.

The nautical device, according to the invention, allows for passengers placed one
10 behind the other and/or side by side to enjoy new sensations specific to the invention. In effect, the front of the nautical device, in accordance with its towing speed, rears up in a progressively vertical fashion against the liquid element, bouncing from wave to wave and leaving the liquid element on occasion.

It comprises, according to a first characteristic, an inflatable front structure, called a
15 Front Structure (fig. 1)(1), of a more or less cylindrical form made from Hypalon neoprene or any other similar material, incorporating perpendicularly at least two inflatable structures of more or less cylindrical shape called Secondary Structures (2).

This invention concerns a non-motorised towable device lifting from the front when
20 towed and leaving the liquid element on occasions for the pursuit of a sensational aquatic leisure activity characterised by its essential components, which are:

- A preferably inflatable structure (fig. 1)(1), elongated uniquely in a principal forwards direction perpendicular to the direction of movement,
- At least two elongated inflatable secondary structures (2), which interlock on the
25 internal side of the front structure with one of the extremities of the secondary structures (2) to the front structure (1), without interlocking to the closed extremities of the front structure, which emerge from the sides.
- At least one elongated inflatable or non-inflatable auxiliary structure (3)(3₁)(3₂) with a transversal section inferior to those of the secondary structures (2), linking the
30 secondary structures (2) in a parallel manner in order to provide maximum buoyancy, the auxiliary structure(s) being able to be optionally juxtaposed together in groups to link the secondary structures.
- A means for the passenger or passengers to hold on by (5).

- The secondary (2) and auxiliary structures (3)(3₁)(3₂), lying parallel to each other in the nautical device's principal direction of movement, and being approximately perpendicular to the principal direction of the front structure (1), the secondary structures (2) and the auxiliary structures (3)(3₁)(3₂) not being linked by a rear structure.

According to the special construction method – the front structure (1) is equipped on its lower part, in particular, the floatation line, with a towing attachment (fig. 1)(6) to facilitate the lifting of the front of the nautical device when towed,

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According to the special construction method – towing is made possible by means of at least two attachment points fixed to the front structure (1), in alignment with the secondary structures (2) relative to the direction of movement.

- 15 According to the special construction method – the towing attachments (6) comprise at least two towing elements linked to a central point on the external forward part of the nautical device, which is itself linked to a towing element linked to the towing boat.

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- 20 According to the special construction method – the front structure (1) presents an appearance approximately semicircular or delta-wing shaped with the extremities closed, the front structure (1) emerging approximately towards the rear and/or the side,

- 25 According to the special construction method – the front structure (1) would appear to be approximately semicircular or delta wing shaped, comprising at least two straight segments linked together with the closed extremities of the front structure (1), emerging approximately towards the rear and/or to the side.

According to the special construction method – moreover, the nautical device comprises of a supple lateral skirt (7) along each side, markedly triangular in shape, to link the sides of the front structure (1) to the auxiliary structures (3₁)(3₂), or to the most external lateral secondary ones (2).

According to the special construction method – the various different inflatable structures terminate in unlinked extremities with an approximately conical, semi-spherical or ovoid form.

- Moreover, the nautical device comprises a method for the passenger or passengers to hold on with, in particular, straps and/or foot chocks.

According to the special construction method - the nautical device comprises a method for the passenger or passengers to stand upright, lie down, sit or sit astride the secondary structures.

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According to the special construction method – the nautical device, characteristically composed of at least two secondary structures (fig. 2)(2), linked by at least one auxiliary structure (fig. 2)(3), distinctively flat, with a method of directional control for the nautical device, in particular and typically a cord, (12) fixed to each side (13) of the front structure (1) to steer the nautical device by at least one passenger, typically standing upright.

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According to the special construction method - the nautical device, according to the invention, characteristically comprises three secondary structures (2), the central secondary structure being linked at one end and the other by a auxiliary inflatable structure, the two secondary structures on either side of the central secondary structure being joined between each other, the rear part, by lengths of structures forming triangular profiles extending towards the rear, the method for passengers to hold on being situated principally on the secondary structures.

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According to the special construction method – the front of the towable non-motorised nautical device lifts up when towed and leaves the liquid element occasionally in the pursuit of a sensational aquatic sport, a leisure activity, characterised essentially by:

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- An inflatable structure (1) elongated uniquely in a principal forward direction, perpendicular to the direction of movement.
 - An elongated inflatable secondary structure (2) which interlocks on the inner side of the front structure with one of the extremities of the secondary structures (2) to the front structure (1), without interlocking to the closed extremities of the frontal structure, which emerge from the sides.
 - Two elongated inflatable auxiliary structures (3)(3₁), with a transverse section inferior to those of the secondary structures (2), linking the secondary structures (2) in a parallel manner in order to provide maximum buoyancy.
 - A method for the passenger or passengers to hold on with, in particular, straps and/or foot chocks.
 - The secondary and auxiliary structures, lying parallel to each other in the nautical device's principal direction of movement and being approximately perpendicular to the principal direction of the front structure (1), the secondary structure (2) and the auxiliary structures (3)(3₁)(3₂) not being linked by a rear structure.
 - the front structure (1) appears approximately semicircular or delta-wing shaped, with the extremities closed, the front structure (1) emerging approximately towards the rear and/or the side.
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- 20 Towing attachments (6), in particular, under the floatation line, a ~~supple lateral skirt~~ (7) is fixed to the front structure (1) on either side of the nautical device, markedly triangular in shape, linking the sides of the front structure (1) to the auxiliary structures (3)(3₁).
- 25 According to the special construction method – the entire device is composed of hollow or solid rigid structures made, for example, from one of the following materials: plastic, reinforced fibreglass resin, composite material and others.
- According to the special construction method – the entire device is composed of inflatable structures made from supple or watertight materials, for example, from one
- 30 of the following materials: rubber, PVC, Hypalon neoprene and others.

According to the special construction method - at least one of the auxiliary structures (3)(3₁)(3₂) is made from supple or watertight materials, for example: rubber, PVC, Hypalon neoprene. Special techniques have been elaborated in order to allow firstly:

- incorporation of perpendicular structures (2) in the front structure (1),
- 5 - secondly, the construction of the front structure (1).

According to the special construction method - each perpendicular structure (2) can accommodate one or several passengers sitting or standing one behind the other or side by side.

- 10 According to the special construction method - at each side of the perpendicular structures (2), one or several small intermediary structures (3)(3₁)(3₂) can be used as foot rests and stabilisers while ensuring better buoyancy for the nautical device.

According to the special construction method - the different inflatable structures' extremities are cone-shaped or of any other shape they may be terminated in.

- 15 According to the special construction method - straps or any other system can be fixed in any useful place on the nautical device in order to improve the passenger or passengers foothold.

- 20 According to the special construction method - the different structures are interlocked together either by adhesives and/or welding and/or by sewing. The inflatable structures can incorporate (an) independent compartment(s) to increase safety; regarding the question of submergibility, inflatable secondary structures can be interlocked with the front structure by inserting one extremity into the front structure with fasteners or by adhesives and/or welding and/or by sewing.

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Figure 1 represents the nautical device in perspective

Figure 2 represents a variation of the nautical device seen from above

Figure 3 represents a variation of the nautical device seen in perspective.